2013 Assessment and Accountability Information Meeting

Technology for the Smarter Balanced Assessments

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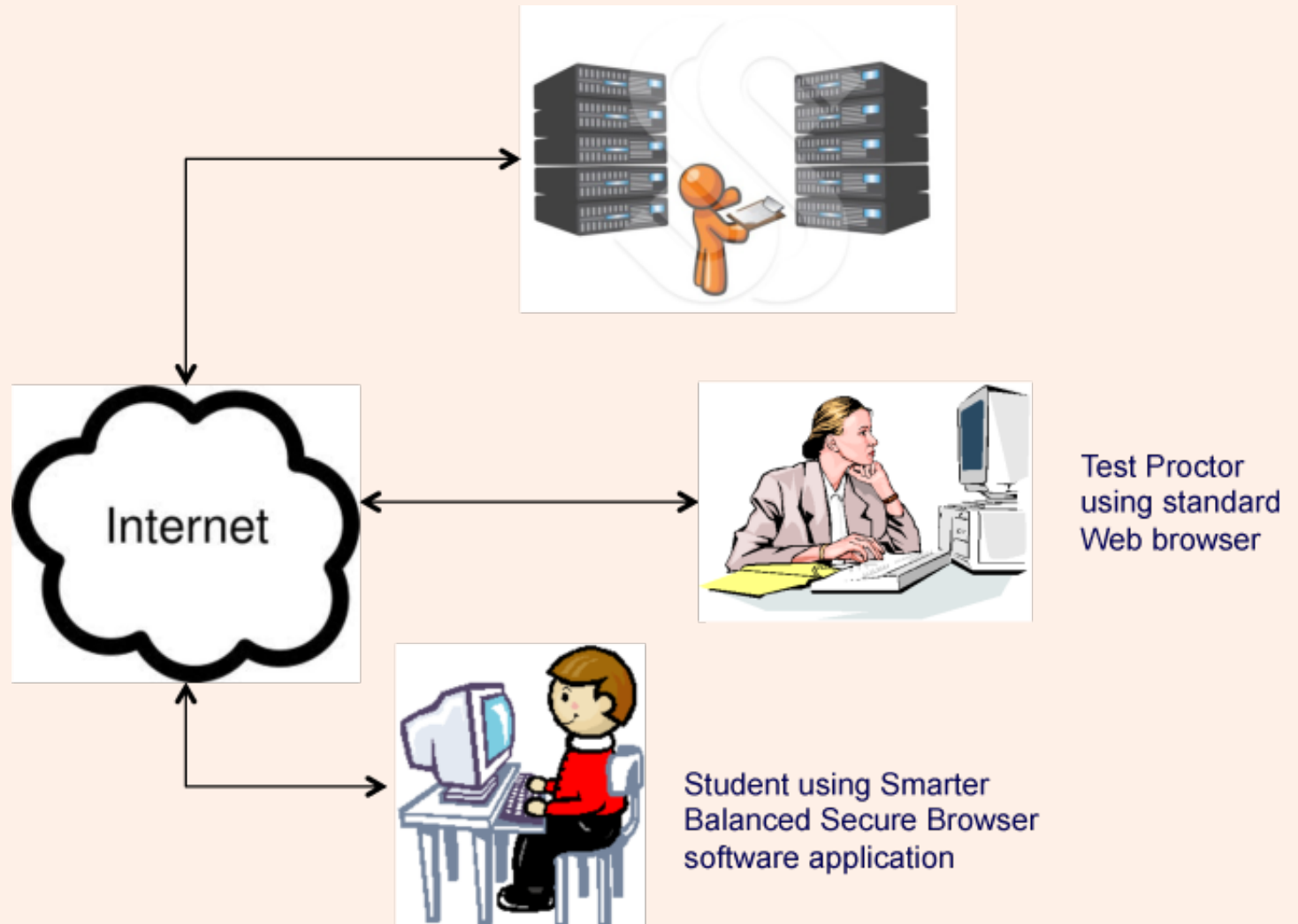Tom Torlakson, State Superintendent of Public Instruction

Preparing For Online Testing

- Engage a multi-disciplinary group at the district and school levels that can plan, recommend policies, develop procedures, and resolve issues before and after testing begins

- Establish the goals for the group, milestones (with expected completion dates) for activities and degree of authority

- Review policies and procedures regarding access and use of technology

  – Are there sufficient protections in place to ensure equipment and bandwidth are allocated consistent with the established priorities?

  – Are the points of contact established (and communicated) with the authority to resolve issues related to the use of technology during testing?

- Share practices with other districts and leverage the CDE and County offices when possible

High-level Technology Overview

Internet

Test Proctor using standard Web browser

Student using Smarter Balanced Secure Browser software application

What technology is needed?

- Computing devices + accessories
- Network bandwidth (internal and Internet)
- Technical support and training
- Facilities (i.e. space, electrical power, etc.)

Student System Requirements
Minimum Operating Systems

- Windows XP SP3 (proposed phase out 2015–16)

- Mac OS X 10.4.4 (proposed phase out 2014–15)

- Mac OS X 10.5 PowerPC (proposed phase out 2014–15)

- Apple iOS 6.x (iPad)

- Android 4.x (Smarter certified)

Student System Requirements
Minimum Operating Systems (cont.)

- Google Chrome OS 19.x ("Chromebook")

- Linux Fedora 6 and Ubuntu 9

- VDI (Virtual Desktop Infrastructure)

Note: Windows RT operating system is not supported at this time.

Student System Requirements Miscellaneous

- 10″ class diagonal display minimum

- 1024 x 768 display resolution minimum (older netbooks may not meet this requirement)

- External keyboard

- Headphones

- Printer (student accommodation only)

Student System Requirements Secure Browser

- Smarter Balanced Secure Browser software application installed on each student's computing device

- Updated version released at the beginning of each school year

- Field Test version scheduled to be available November 18, 2013

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Student System Requirements Secure Browser (cont.)

- Can be used to access Practice Test
  - Launch secure browser, select Training Test link
  - Required for text-to-speech and Braille

- Ensures test security (kiosk mode)

- Checks for list of "prohibited" applications at startup and during process execution

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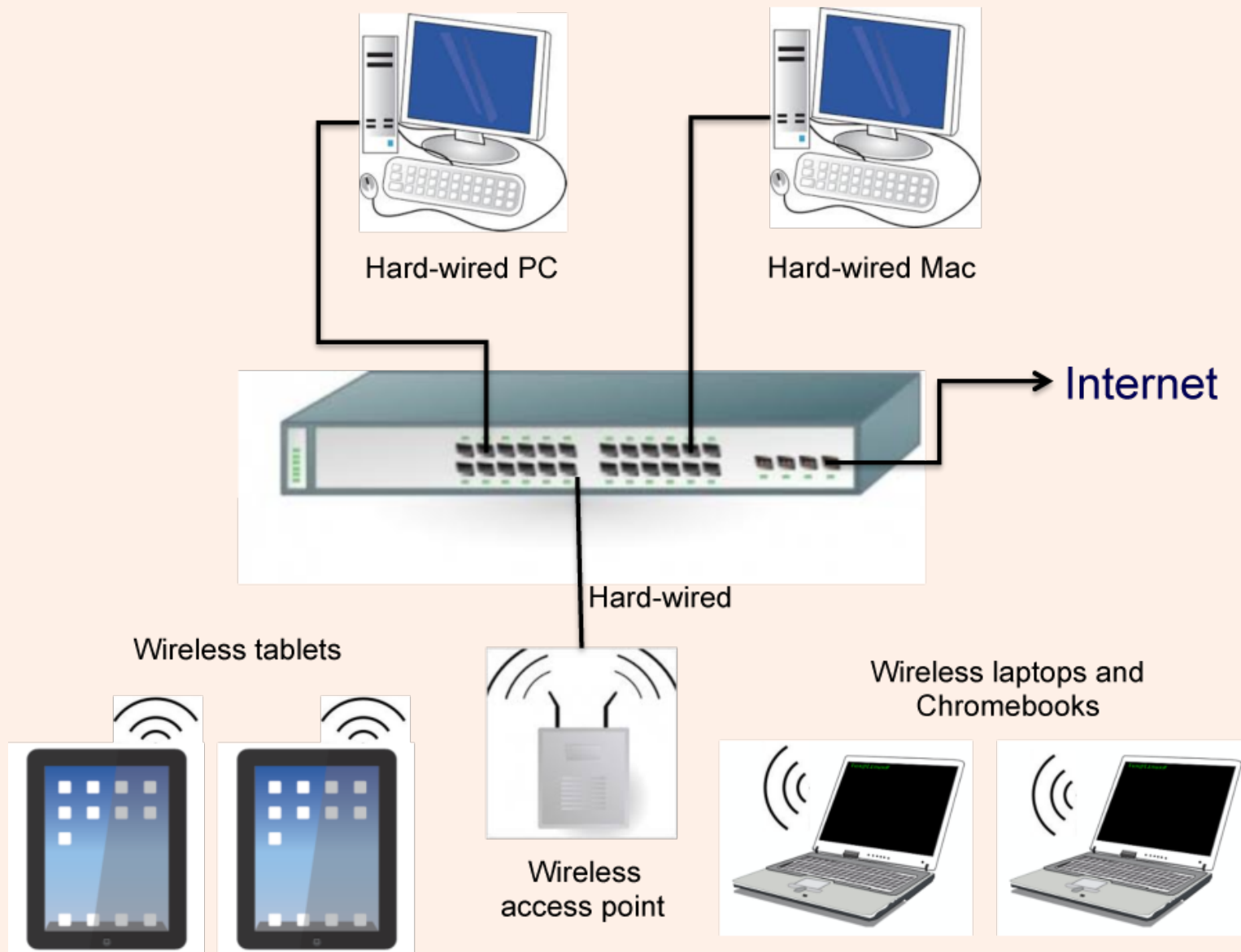of Public Instruction

Student System Requirements Network Bandwidth

- Estimated 20K bps average for each student connected to system

- Network activity may spike at startup to download updated client-side code

- More devices may require more internal network hardware (e.g., wireless access points, access layer switches)

- More Internet bandwidth may be required from school to district, and/or district to county office

Typical School Network

Hard-wired PC

Hard-wired Mac

Internet

Hard-wired

Wireless tablets

Wireless
access point

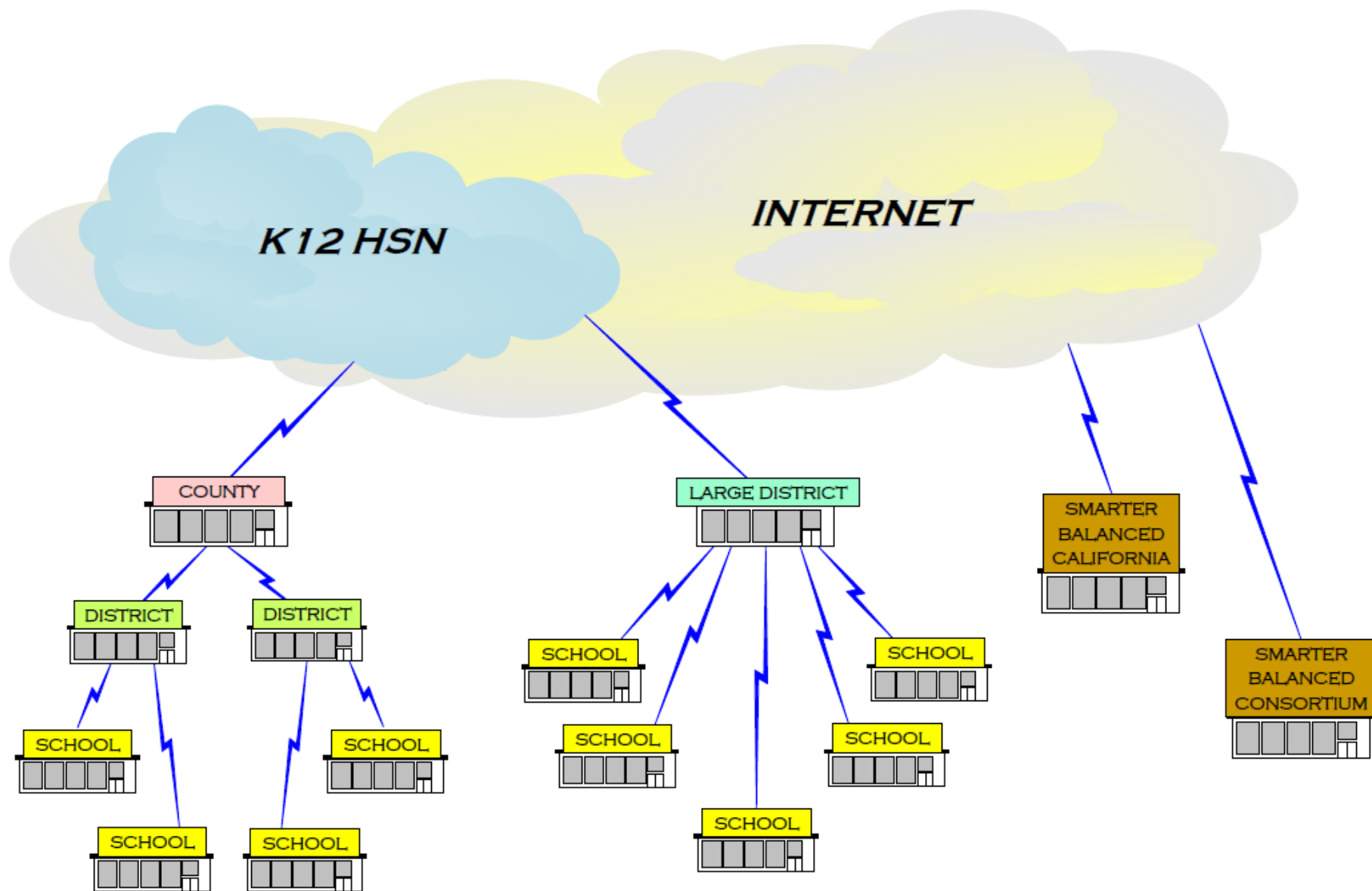Wireless laptops and
Chromebooks

KEY:
: HIGH SPEED DATA CIRCUIT

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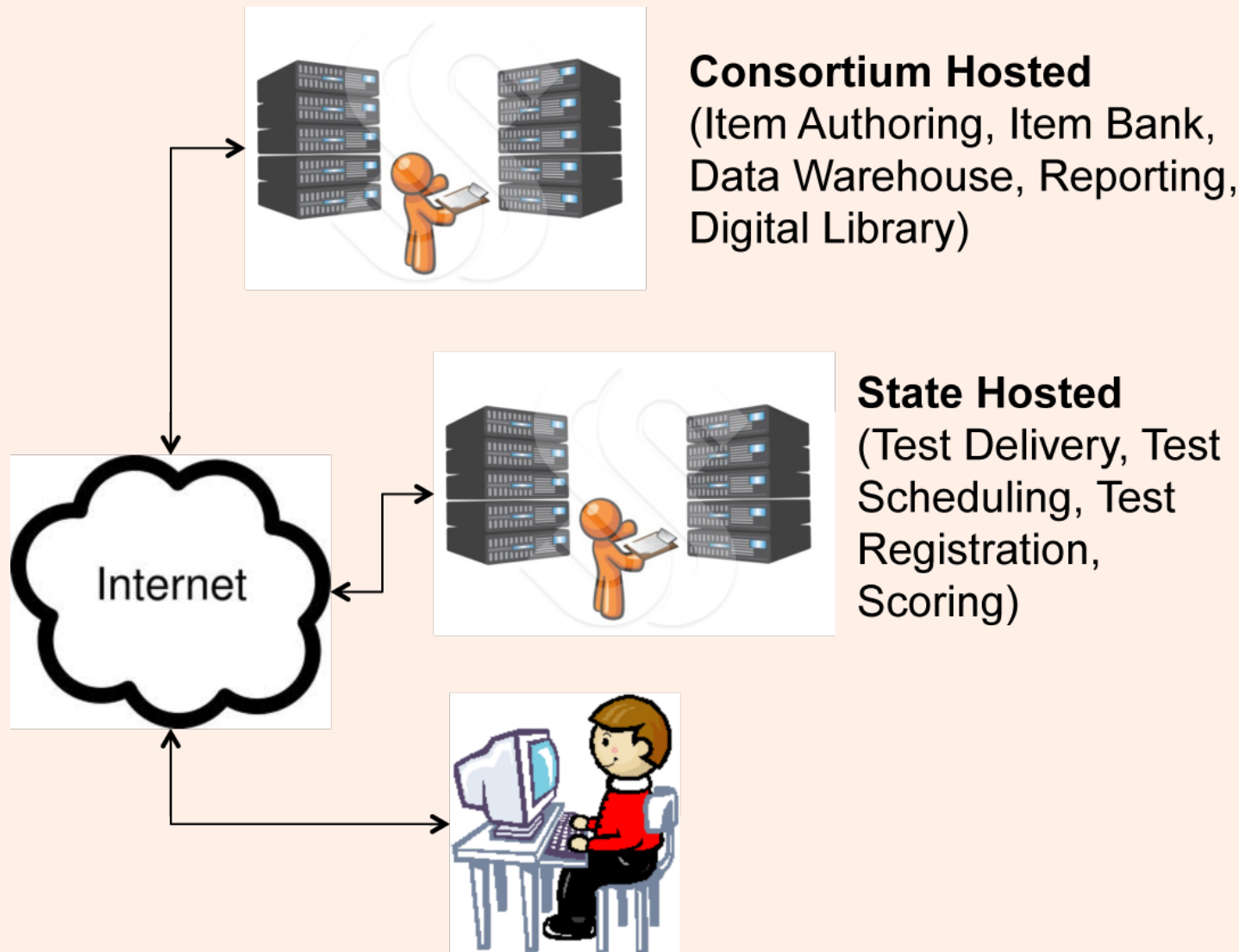K12 HIGH SPEED NETWORK + SMARTER BALANCED DIAGRAM
SEPTEMBER 26, 2013

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Smarter Balanced Server Hosting

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Consortium Hosted
(Item Authoring, Item Bank, Data Warehouse, Reporting, Digital Library)

State Hosted
(Test Delivery, Test Scheduling, Test Registration, Scoring)
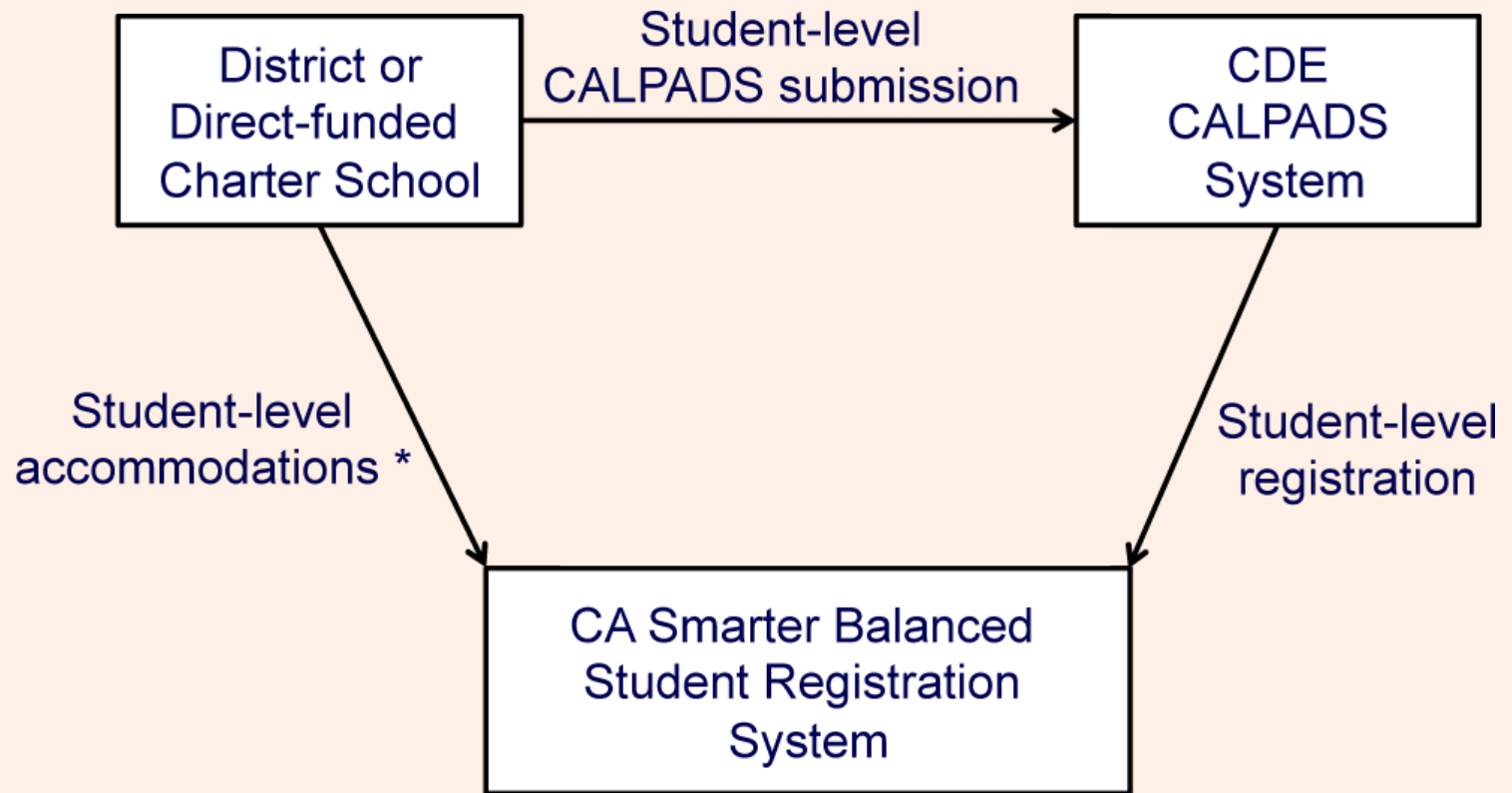
Internet

Factors to Consider

- How often will the device be used for non-assessment purposes?
- Additional laptops, tablets, and Chromebooks may require school-level wireless network improvements
- Facilities with electrical power limitations may consider battery operated devices
- Individual students with special device needs
- Manageability and support of devices

Student Registration


```
┌──────────────────────┐   Student-level         ┌──────────────────────┐
│ District or          │   CALPADS submission    │ CDE                  │
│ Direct-funded        │ ──────────────────────▶ │ CALPADS              │
│ Charter School       │                         │ System               │
└──────────────────────┘                         └──────────────────────┘
         │                                                   │
  Student-level                                        Student-level
  accommodations *                                     registration
         │                                                   │
         ▼                                                   ▼
              ┌──────────────────────────────────────┐
              │ CA Smarter Balanced                  │
              │ Student Registration                 │
              │ System                               │
              └──────────────────────────────────────┘
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* Reference Smarter Balanced *Usability, Accessibility, and Accommodations Guidelines* (http://www.cde.ca.gov/292859)

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Are Schools Ready, Technology-wise?

- Smarter Balanced Technology Readiness Tool (TRT)
  - User account required
  - Number of devices at school-level
  - Network capacity at school-level
  - Test Window (days) at school-level
  - Readiness reports at school-level

TRT Sample Report

List of schools in a district:

Organization	Org Code	% of Device to Test-Taker Readiness of the School ⓘ	% of Network Readiness of the School ⓘ
Test Elementary School 3	🔍 🖩 CA-99999999999991	🟧 29%	🟧 36%
Test Middle School 4	🔍 🖩 CA-99999999999992	🟨 64%	🟨 54%
Test School 1	🔍 🖩 CA-99999999999999	🟩 >100%	🟩 >100%
Test School 2	🔍 🖩 CA-99999999999990	🟩 >100%	🟩 >100%
			Next »

- Percent of students who can test given the number of available devices
- Percent of students who can test given the network capacity
- "What-if" calculator

How many days will it take to test?

- Smarter Balanced Technology Readiness Calculator
  - Web-based open to public
  - Inputs: number of students, number of computers, computer hours available per day, Internet bandwidth
  - Outputs: estimated number of days to administer tests, estimated network bandwidth required

Technology Readiness Calculator Sample

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Number of students testing: 600

Number of computers available: 60

Computer hours available per day: 4

Internet connection speed: 10 Mbps

Calculate   Reset

Estimated minimum number of days to complete ELA and Math assessments: **20.00 days** [1]

Estimated network bandwidth required: **1.20 Mbps (12.00% of total bandwidth)** [2]

http://www3.cde.ca.gov/sbactechcalc/
(open to public access)

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Test Proctor Interface

- Allows proctor to specify a type of assessment (e.g., grade 3 mathematics) and create a unique "session ID"

- Student specifies first name, SSID, and "session ID" at logon

- Proctor approves student to start the test

- Proctor can monitor the progress of each student in the test session

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Test Proctor Interface (cont.)

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Select a test to administer, then Start Session:

Student Interface

- Smarter Balanced "Secure Browser" application is used to secure the assessment

- Numerous accessibility and accommodation tools available (e.g., zoom, text-to-speech, glossary, language translations, American Sign Language)

- Mark item for review, digital notepad

- Pause/Restart

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Student Interface (cont.)

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Student Interface (cont.)

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Waiting for test proctor to approve

Smarter Balanced Assessment Consortium

Waiting for TA approval...

Please wait while your Test Administrator reviews the settings for your test. This may take a few minutes...

Click to cancel the request and return to the login page.

Test Proctor Interface

Approve student sign-in so student can start test:

Test Proctor Interface (cont.)

Monitor status of each student:

Resources

- CDE Technology Readiness Web page: http://www.cde.ca.gov/293317

- *Smarter Balanced Technology Strategy Framework and System Requirement Specifications* (soon to be updated)

- TRT *Key Local Considerations* document

- E-mail: sbac-itreadiness@cde.ca.gov

Resources

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